

Listing of Claims:

What is claimed, is

1. - 5. (Canceled)

6. (currently amended) A wartermark signal generating method for generating wartermark signals to be embedded as a digital watermark in real-time contents, the method comprising the steps of:

inputting the real-time contents;

storing the real-time contents;

generating, from the real-time contents, wartermark signals to be outputted corresponding to predicted intensities of the real-time contents; and

storing the generated wartermark signals to be outputted,

wherein the generation step includes the steps of:

predicting intensities of the wartermark signals from prediction of perceptual stimulation values of the real-time contents after a predetermined lapse of time;

controlling embedding by use of a message to be embedded as a digital watermark in the real-time contents; and

generating the wartermark signals to be outputted by use of outputs from the prediction step and outputs from the control step,

wherein the perceptual stimulation values represent sound or luminance, and the prediction step includes a step of generating a predicted inaudible amount or a predicted invisible amount of wartermark signals corresponding to intensities of the real-time contents after the predetermined lapse of time by use of data stored in the step of storing the real-time contents,

55 wherein the control step includes a step of generating a value to be embedded, which is a
56 binary based on a positive and a negative, by use of a secret key, the message and a
57 pseudo-random number, and

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59 further comprising a step of controlling outputs from the step of storing the generated wartermark
60 signals to be outputted, by comparing the generated wartermark signals with the real-time
61 contents after a time needed to embed the generated wartermark signals has passed,

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63 wherein the input step includes a step of dividing the real-time contents, and the
64 generation step includes a step of generating the wartermark signals by use of the divided
65 real-time contents.

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67 7. - 20. (Canceled)